

REMARKS / ARGUMENTS

The present application includes pending claims 1-48, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Claims 31 and 45 stand rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent Publication No. 2003/0007644, by Sprunk et al. (hereinafter, "Sprunk"). Claims 1, 2, 6, 10-12, 16, 20-22, 26, 30, 35, 36, 40 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 7,293,292 issued to Testardi et al. (hereinafter "Testardi"), in view of Sprunk.

Without conceding that Sprunk qualifies as prior art under 35 U.S.C. § 102(e), the Applicant respectfully traverses these objections and rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

REJECTION UNDER 35 U.S.C. § 102

I. Sprunk et al. Does Not Anticipate Claims 31 and 45

The Applicant first turns to the rejection of claims 31 and 45 under 35 U.S.C. 102(e) as being anticipated by Sprunk et al.. With regard to the anticipation rejections under 102(e), MPEP 2131 states that "[a] claim is

anticipated only if **each and every element** as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” See Manual of Patent Examining Procedure (MPEP) at 2131 (internal citation omitted). Furthermore, “[t]he identical invention must be shown in as complete detail as is contained in the ... claim.” See id. (internal citation omitted).

The Applicant maintains that Sprunk et al. does not disclose or suggest at least the limitation of “a mapper” as recited by the Applicant in independent claim 31. The Final Office Action refers to Sprunk, paragraph [0036], FIG. 4, Element 420 and 425 for support and states that “the first stage of dual DES Key Generator is considered as a key mapper.” The Applicant points out, however, that there is no suggestion in paragraph [0036] of Sprunk that DES generator 420 is a mapper. Since DES is the abbreviation for ‘Data Encryption Standard’, it is to be assumed that the ‘DES generator 420’ operates in accordance with well-known DES operation principles. DES functionality, however, is not one of mapping input bits.

Additionally, the Final Office Action refers to MPEP §2111 and states that:

the broadest and reasonable claim interpretations must be made by the Examiner where Sprunk teaches double-dual stages DES operation (Sprunk: Figure 4) and the DES operations constituted with substitutions/permutation/swapping functional stages along with the key hashing function, as shown in Figure 4, is qualified to provide mapping/scrambling functions to meet the claim limitations as recited in the claim. (Emphasis in the Final Office Action).

However, as pointed out above, Sprunk, in the cited paragraph [0036], does not suggest that DES generator 420 is a mapper and the Applicant thus fails to see

how the Examiner's statement in the Final Office Action is supported by Sprunk. Because of the lack of support from Sprunk, the Applicant assumes that the examiner is taking official notice with respect to the "a mapper" as claimed by the Applicant. If this is the case, the Applicant traverses the Final Office Action finding of official notice, and asserts that common knowledge and/or Sprunk do not support a conclusion that a DES generator 420 is a mapper. In accordance with MPEP §2144.03, the Examiner is respectfully requested to provide the explicit basis on which the examiner regards the matter as subject to official notice, and to provide documentary evidence thereto, if the rejection is to be maintained.

The Applicant further maintains that Sprunk et al. does not disclose or suggest at least the limitation of "a scrambler coupled to said mapper" as recited by the Applicant in independent claim 31. The Final Office Action refers to Sprunk, paragraph [0039], FIG. 4, Element 450, 455 and 456 for support and states that "the second stage of dual DES key scrambler (i.e. the key hashing function) can be considered as the scrambling function." Paragraph [0039] does not teach or suggest that Elements 450, 455 and 460 are a "scrambler coupled to said mapper" as recited by the Applicant. The Applicant points out that the Final Office Action argues above that "said mapper" is provided by the elements 420 and 425 of FIG. 4 in Sprunk. Hence, assuming *arguendo* that elements 450, 455, and 460 constitute "a scrambler," as suggested by the Final Office Action, FIG. 4 cannot then support "a scrambler coupled to said mapper" since the connections shown in

FIG. 4 of Sprunk do not show that "a scrambler" and "a mapper", as defined in the Final Office Action, are coupled.

The Final Office Action responds to the above applicant's argument with the citation given above, stating that "Sprunk teaches double-dual stage DES operation . . . and the DES operation . . . is qualified to provide mapping/scrambling functions to meet the claim limitations as recited in the claim." The Applicant notes that a) the Applicant does not claim a double-dual stage DES in claims 31 or 45, and thus the argument is moot, even under "the broadest and reasonable claim interpretation", and b) the Final Office Action does not provide any further support that Sprunk supports "a scrambler coupled to said mapper" as recited by the Applicant. Without conceding that a mapper and/or a scrambler are shown by Sprunk, even if a scrambler and a mapper were present in Sprunk, the elements by themselves would not constitute the Applicant's limitation, expressly stating that the scrambler is "coupled" to the mapper. The Final Office Action, however, does not provide any support that shows that the scrambler is coupled to a mapper, and thus Sprunk does not show every element as required by MPEP §2131 recited above.

Thus, the Applicant considers to have overcome the rejection of claim 31 and 45 and respectfully requests the claims to be made allowable.

REJECTION UNDER 35 U.S.C. § 103

Claims 1, 2, 6, 10-12, 16, 20-22, 26, 30, 35, 36, 40 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Testardi, in view of Sprunk.

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure ("MPEP") states the following:

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine the teaching. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure.

See MPEP at § 2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art suggests the desirability of the combination," and that "although a prior art device 'may be capable of being modified to run the way the apparatus is claimed, there must be a *suggestion or motivation in the reference to do so*'" (citing *In re Mills*, 916 F.2d 680, 16 USPQ 2d 1430 (Fed. Cir. 1990)). Moreover, MPEP § 2143.01 also states that the level of ordinary skill in the art cannot be relied upon to provide the suggestion..., citing *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ 2d 1161 (Fed. Cir. 1999). Additionally, if a *prima*

facie case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

I. Testardi in view of Sprunk does not anticipate independent claims 1, 11, 21, and 35

The applicant now turns to the rejection of claims 1, 11, 21, and 35 as being unpatentable over Testardi in view of Sprunk.

With regard to independent claim 1, the Applicant submits that Testardi does not disclose "a method for producing a secure key," as claimed in the Office Action. The Office Action refers for support to Testardi, col. 6, lines 29-31: "[T]he vendor or manufacturer will generate an electronic key correlated to the unique serial number of stored in the printer." The applicant respectfully submits that Testardi, col. 6, lines 29-31 does not teach or suggest producing a **secure** key, as cited by the Applicant. Although the Office Action apparently interprets "electronic key" as stated in Testardi as "secure key," Testardi, col. 6, lines 29-31 does not provide any support for "secure key."

Furthermore, the Final Office Action responds to the above argument by citing Testardi, column 6, lines 49-51 to show support for "*producing* a secure key," as stated by the Applicant. However, as the Final Office Action states, Testardi describes "once an electronic key is *received* and authenticated, the premium functionality is permanently enabled." The Applicant notes that Testardi

indeed describes receiving a key, and not producing a key. Furthermore, the Applicant does not claim "enabling premium functionality." Thus, the cited passage from Testardi does not provide any support for "producing a secure key."

Hence, the Applicant believes to have overcome the rejection to the Applicant's claim limitation of "producing a secure key," and respectfully requests that claim 1 be made allowable.

The Applicant respectfully submits that Testardi in view of Sprunk does not teach or suggest the Applicant's claim limitation:

generating a first output key based on said at least said first input key, said second input key and said third input key, wherein said first output key is unique and differs from said at least said first input key and said third input key is a key variation comprising a device identity.

The Office Action relies for support on Testardi col. 6, line 29-31, and col. 4, line 60-65, and on Sprunk for the underlined portions of the Applicant's claim.

Testardi, col. 6, line 29-31 (cited above), and col. 4, line 60-65 states:

The electronic key (130) is correlated or based on the printer's serial number (121). For example, the electronic key (130) is preferably generated using a mathematical algorithm using the printer's serial number (121) as an input to the algorithm. This may be performed by the computer system (136).

The Office Action states that "the printer device's serial number is considered as the third input key." Initially, the Applicant notes that Testardi does not suggest or teach "generating a first output key based on said **at least** said first input key, said second input key **and** said third input key." There is no suggestion or teaching in Testardi that an output key may be generated using at least said first input key, said second input key, and said third input key. The Office Action further states "Testardi does not expressly disclose receiving at least a first input key, a second input key besides receiving a third input key to generate the output key."

(Emphasis in Office Action). The Applicant agrees with the Examiner that Testardi does not disclose receiving input keys. In addition, Testardi does not teach or suggest any generating of an output key from multiple input keys.

The Office Action suggests that it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine teaching of Sprunk within the system of Testardi because:

a) Testardi teaches a method for generating a security key for a printer device . . . and b) Sprunk teaches an enhanced mechanism for generating a cryptographic key to maintain a high level of security against hostile attackers by using multiple security input key variations . . .

The Applicant respectfully disagrees. The Applicant respectfully asserts that neither Testardi nor Sprunk suggest the combination of points a) and b) as recited in the Office Action. Instead, Office Action relies on an ordinary-person standard to establish obviousness. MPEP §2143.01(IV) states "A statement that modifications of the prior art to meet the claimed invention would have been well within the ordinary skill of the art . . . is not sufficient to establish a prima facie case of obviousness *without some objective reason to combine the teachings of the references.*" (Emphasis added, original emphasis omitted.) "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." MPEP §2143.01(IV).

Furthermore, the Final Office Action relies on Testardi, column 6, lines 29-31 to support a) above. However, Testardi, column 6, lines 29-31 reads: "[I]f the user does order or request the added functionality (150), the vendor or manufacturer will generate an electronic key correlated to the unique serial number stored in the printer (142)." The Applicant points out that this statement does not support statement a) above, and does not "teach a method for generating a security key for a printer device." Instead, Testardi, column 6, lines 29-31

merely states that a vendor or manufacturer will generate a key, if so requested. Thus, because the statement a) above is not actually supported by Testardi, the combination of a) and b) above must necessarily fail, for lack of support.

Hence, the Applicant believes to have overcome the rejection to claim 1 for at least the reasons provided above. Because the Office Action does not establish a prima facie conclusion of obviousness, the Applicant respectfully requests that claim 1 be made allowable.

Independent claims 11, 21, and 35 are similar to claim 1 and the above arguments may be applied. Hence, the Applicant respectfully requests that independent claims 11, 21, and 35 are made allowable also.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 1, 11, 21 and 35.

II. Rejection of dependent claims

Dependent claims 2, 6, 10, 12, 16, 20, 22, 26, 30, 36, 40, and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Testardi, in view of Sprunk. The Applicant notes that these claims depend on independent claims 1, 11, 21, and 35. Since the Applicant believes to have overcome the rejection under 35 U.S.C. §103 of independent claims 1, 11, 21, and 35, the Applicant respectfully requests that the dependent claims 2, 6, 10, 12, 16, 20, 22, 26, 30, 36, 40, and 44 are made allowable.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2, 6, 10, 12, 16, 20, 22, 26, 30, 36, 40, and 44.

CONCLUSION

Based on at least the foregoing, the Applicant believes that all claims 1-48 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and request that the Examiner telephone the undersigned Attorney at (312) 775-8105.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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